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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/719,725	11/21/2003	Frank-Dieter Zimmermann	FA1094USNA	3167

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E I DU PONT DE NEMOURS AND COMPANY  
LEGAL PATENT RECORDS CENTER  
BARLEY MILL PLAZA 25/1128  
4417 LANCASTER PIKE  
WILMINGTON, DE 19805

EXAMINER
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TSOY, ELENA

ART UNIT	PAPER NUMBER
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1762

MAIL DATE	DELIVERY MODE
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06/15/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/719,725		ZIMMERMANN ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Elena Tsoy		1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 April 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3,4 and 6-11 is/are pending in the application.
- 4a) Of the above claim(s) 12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,4 and 6-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **Response to Amendment**

Amendment filed on April 23, 2007 has been entered. Claims 2, 5, 12 have been cancelled. New claims have been added. Claims 1, 3, 4, 6-11 are pending in the application.

### ***Election/Restrictions***

Applicant's election of Group I, claims 1, 3, 4, 6-11, in the reply filed on April 23, 2007 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Newly submitted claim 9 is directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: claim 9 is directed to the use of **combination** of NIR and UV for melting and curing a powder coating composition which is independent and distinct from claim 1 directed to the use of NIR only for melting and curing the powder coating composition.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claim 9 is withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

### ***Claim Objections***

1. Objection to claim 1 because of the informalities has been withdrawn due to amendment.
2. Objection to claim 11 because of the informalities has been withdrawn due to amendment.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1, 3, 4, 6-8, and 10-11 stand rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement for the reasons of record set forth in paragraph 5 of the Office Action mailed on 11/21/2003 because in contrast to Applicants argument, heating rates relate to *high energy radiation* in step a, which is not necessarily NIR. Note that NIR is applied in step b to cure a powder coating not a material of step a.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Rejection of claim 5 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention has been withdrawn due to cancellation of the claim.
7. Rejection of claim 9 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention has been withdrawn due to amendment.
8. Claims 1, 3-4, 6-8, 10-11 stand rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention for the reasons of record set forth in paragraph 7 of the Office Action mailed on 1/19/2007 because, in contrast to Applicants argument, reciting particular materials do not obviate the rejection because it is still not clear whether absorption of high-

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energy radiation within a wavelength in the range of 250 to 2,500 nm and heating rates of more than 50<sup>0</sup>C per second are *inherent* properties of the material or the particular radiation is applied to the material. For examining purposes the language of claim 1 "a) covering the surface with material, which absorbs high-energy radiation within a wavelength in the range of 250 to 2,500 nm and having heating rates of more than 50<sup>0</sup>C per second" was interpreted as a step of covering the surface with material, which has inherent properties of being capable of absorbing high-energy radiation within a wavelength in the range of 250 to 2,500 nm and having heating rates of more than 50<sup>0</sup>C per second.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Rejection of claims 1, and 7, 8, 10-11 under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted state of art in view of Blatter et al (WO 99/41323) has been withdrawn due to amendment.

11. Claims 1, 3-4, 7-8, and 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted state of art in view of Blatter et al, further in view of Nickerson (US 3,860,506) for the reasons of record set forth in paragraphs 9 and 10 of the Office Action mailed on 1/19/2007.

12. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted state of art in view of Blatter et al, further in view of Nickerson, and further in view of

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Honda et al (US 6,800,374) for the reasons of record set forth in paragraph 11 of the Office Action mailed on 1/19/2007.

***Response to Arguments***

13. Applicants' arguments filed April 23, 2007 have been fully considered but they are not persuasive.

**Obviousness Rejection over Blatter et al.**

(A) Applicants argue that the Examiner's suggestion that the conductive primer shown in the specification on page 2, line 10 can be the applied material of first step of Applicants' process is totally incorrect. The materials as now claimed do have the specific heating rate and high energy radiation absorption rate as set forth in the claims. Some reference must be cited by the Examiner to support her position that any material has the high energy absorption rate and heating rate as set forth in the claims.

The Examiner respectfully disagrees with this argument. There is no need to cite references to support the Examiner's position that any material has the high energy absorption rate and heating rate as set forth in the claims, because without citation, one of ordinary skill in the art would easily recognize that **any** material can be heated at claimed rate of more than 50<sup>0</sup>C if a very thin coating layer of the material is exposed a very intense energy source (e.g. thousands of very powerful UV lamps). In any case, the citation of references is no longer needed because amended claims now recite *claimed* material so that it has claimed properties *inherently*.

(B) Applicants argue that the experiment data in Table 1 on page 8 of the specification clearly shows that physical properties and curing times of powder coatings applied to a carbon layer are superior to those applied by prior techniques such as those taught by Blatter.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on *combinations* of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Claims 1-4, 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over *combination* of Applicant's admitted state of art, Blatter et al and Nickerson.

(C) The Examiner's comment in regard to Claim 11 are not understood since Claim 11 was not part of the election requirement and the substrate was not an issue.

The Examiner meant that claim 11 was not addressed is further limiting non-elected member of Markush group of claim 10.

#### **Obviousness Rejection over Blatter et al. and Nickerson**

The same comments and arguments in regard to Blatter also apply to this rejection and will not be repeated. Nickerson is directed to the application of a graphite coating to a substrate to make the substrate electrically conductive and the graphite coated substrate is then electrocoated with a coating composition which is NOT a powder coating composition.

Nickerson is directed to a completely unrelated technology. Nickerson is directed to coating non-metallic porous substrates that need to be made electrically conductive for the subsequent application of a coating layer by electrocoating. But Applicants' invention is directed to applying a powder coating composition which does not require an electrically conductive surface. The

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material that Applicants apply initially improves curing and physical properties of the powder coating and are not present as in Nickerson to provide electrical conductivity to the substrate. Further, Applicants do not apply the powder coating by electrophoretic deposition as is required by Nickerson. The rejection based on Blatter and Nickerson must be withdrawn and the claims allowed.

The Examiner respectfully disagrees with this argument.

First of all, in contrast to Applicants statement, Applicants admitted in the Background of Invention that the use of powder coatings to coat non-metallic substrates is much more difficult than coating metallic substrates with powder coatings due to the insufficient surface conductivity of the substrate and inefficient grounding of the substrate, and as a result, the powder coating is deposited unevenly and the adhesion of the powder coating to the substrate is poor (See P5).

Secondly, Nickerson is applied by the Examiner for teaching: "Although, as described below, the resultant graphite coating provides the conductive base layer for electrophoretic deposition, the graphite coating may also be used to provide a *superior conductive base* for electrocoating nonconductive bodies by such processes as electroplating or electrostatic deposition." (See column 4, lines 22-28). Thus, in contrast to Applicants statement, Nickerson teaches electrostatic deposition.

Thirdly, Applicants statement that Applicants' invention is directed to applying a powder coating composition which does not require an electrically conductive surface is incorrect: in paragraph 10, Applicants teach that in claimed invention powder coating is deposited electrostatically, i.e. Applicants apply the powder coating by electrostatic deposition as is required by Nickerson. Therefore, Applicants' statement that Applicants' invention is directed to



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applying a powder coating composition which does not require an electrically conductive surface is entirely incorrect because, as admitted by Applicants, electrostatic deposition of any coating requires electrically conductive surface.

In response to applicant's argument that Nickerson is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Nickerson is reasonably pertinent to the particular problem with which the applicant was concerned, namely, the insufficient surface conductivity of the substrate and inefficient grounding of the substrate, for electrostatic deposition of any coating.

**Obviousness Rejection over Blatter et al., Nickerson, Kawada et al. and Honda et al.**

Kawada is totally irrelevant art since it is directed to forming ceramic heaters and not to the application of powder coatings. Kawada deposits a graphite layer by pyrolysis of methane at a temperature of 1900 to 2200°C to form a resistance heater element (see Kawada, col. 4, lines 45-53). Using such temperatures would disintegrate a typical plastic substrate and deform many metal substrates and certainly could not be used in Applicants' claimed process.

The argument is unconvincing because Kawada et al is no longer relevant due to cancellation of the claim 5.

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Similarly, Honda is totally irrelevant to Applicants' invention since Honda is directed to forming a cleaning tape and has no relation to the application of a powder coating composition which is Applicants claimed invention.

The Examiner respectfully disagrees with this argument. Honda is relevant because it is used as evidence of the well known fact that electric resistivity of an electroconductive layer depends on the thickness of the layer.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elena Tsoy whose telephone number is 571-272-1429. The examiner can normally be reached on Monday-Thursday, 9:00AM - 5:30 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on 571-272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Elena Tsoy  
Primary Examiner  
Art Unit 1762

ELENA TSOY  
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June 11, 2007